

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Review of Part 87 of the Commission's Rules)	WT Docket No. 01-289
Concerning the Aviation Radio Service)	

REPLY COMMENTS OF TERRESTAR NETWORKS INC.

TerreStar Networks Inc. ("TerreStar") hereby files these reply comments on the Second Further Notice of Proposed Rulemaking ("FNPRM") in the above-captioned proceeding.¹

I. INTRODUCTION AND SUMMARY

TerreStar is the proposed assignee of a letter of intent ("LOI") authorization held by TMI Communications and Company, Limited Partnership ("TMI").² The LOI authorization, which was originally granted in 2001, reserves spectrum in the 2 GHz mobile satellite service ("MSS") band (2180-2200 MHz (space-to-Earth) and 2000-2020 MHz (Earth-to-space)) that can be used to serve the United States via TerreStar-1.³

¹ *Review of Part 87 of the Commission's Rules Concerning the Aviation Radio Service*, Second Report and Order and Second Further Notice of Proposed Rulemaking, WT Docket No. 01-289, FCC 06-148 (rel. Oct. 10, 2006).

² See File Nos. SAT-ASG-20021211-00238 and SAT-AMD-20061127-00143.

³ See *TMI Communications and Company, Limited Partnership, Order*, 16 FCC Rcd 13808 (Int'l Bur. 2001); *TMI Communications and Company, Limited Partnership, and TerreStar Networks, Inc. Application for Review and Request for Stay, Memorandum Opinion and Order*, 19 FCC Rcd 12603 (2004). The assignment application was amended on November 27, 2006 to (among other things) update and supplement TerreStar's ownership information and the parties' public interest showing.

TerreStar plans to build, own and operate a resilient, interoperable two-way communications system to address civil defense and disaster preparedness communications needs in North America.⁴ This will be achieved through next-generation integrated mobile satellite and terrestrial communication networks that will provide universal access and tailored applications throughout North America on a universal chipset that can be incorporated in a wide range of handsets, land mobile radios (LMR) and other conventional wireless devices. TerreStar's network will offer voice, Internet, email, messaging, conferencing and other business and productivity applications.

In light of the fact that the two bodies with principal jurisdiction over civil aviation – ICAO internationally and the FAA domestically – have not yet developed standards for AMS(R)S, it would be premature to adopt Part 87 rules for the provision of AMS(R)S in the 2 GHz MSS band. At the appropriate time, however, the Commission should expand Part 87 to include AMS(R)S rules for the 2 GHz MSS band, which should include intra-system priority and preemptive access requirements for AMS(R)S' safety of life communications. Finally, the Commission should take no action in this proceeding that would foreclose the opportunity to change or waive outdated restrictions that were adopted for MSS networks that include an ancillary

⁴ TerreStar will operate the network in the United States. Its affiliate, TerreStar Networks (Canada) Inc., will operate the network in Canada.

terrestrial components (“ATC”) in order to protect 2 GHz MSS aeronautical services that are no longer planned or provided.

II. THE COMMISSION SHOULD NOT ADOPT PART 87 RULES FOR AMS(R)S SYSTEMS IN THE 2 GHz BAND AT THIS STAGE.

The Commission recognized in the FNPRM that it is unclear whether international standards are sufficiently advanced to permit adoption of Part 87 AMS(R)S rules for additional bands.⁵ It noted that NTIA had argued against broadening Part 87 to include MSS systems other than the Inmarsat system, because “the International Civil Aviation Authority (“ICAO”) has not yet adopted Standards and Recommended Practices (“SARPs”) for such AMS(R)S operations.”⁶ In light of the unclear state of the record, the Commission sought comment “on the status of the full range of applicable aviation standards, both domestically and internationally.”⁷

The aviation standards for the 2 GHz MSS band are at too preliminary a stage internationally to warrant extending Part 87 to AMS(R)S operations in the band. Although ICAO, subsequent to the time that NTIA filed its earlier comments, developed a SARP for AMS(R)S,⁸ the SARP is a generic document that applies across multiple MSS frequencies bands. It is TerreStar’s

⁵ FNPRM, ¶ 10.

⁶ FNPRM, ¶ 10.

⁷ FNPRM, ¶ 30.

⁸ See International Standards and Recommended Practices – Aeronautical Telecommunications, Annex 10 to the Convention on International Civil Aviation, Volume III (Communication Systems), Part I (Digital Data Communication Systems), Chapter 4 (Aeronautical Mobile Satellite (Route) Service).

understanding that a 2 GHz MSS operator wishing to provide AMS(R)S must submit a detailed, system-specific validation report and implementation manual to ICAO for approval, and that the approval process can be lengthy. To TerreStar's knowledge, no 2 GHz MSS operator has initiated this process.

Domestic aviation standards for the 2 GHz MSS also are too preliminary to justify an expansion of Part 87. Like ICAO, the Federal Aviation Administration ("FAA") has developed general standards, in the form of a Technical Standards Order ("TSO"), for the provision of AMS(R)S.⁹ In order to satisfy the FAA's AMS(R)S requirements, however, an MSS system must satisfy both the TSO and more detailed minimum operational performance standards ("MOPS") that are to be developed by an ad hoc committee of the Radio Technical Commission for Aeronautics ("RTCA"), which is a federal advisory committee. To TerreStar's knowledge, the RTCA has not developed, or even begun to develop, a MOPS for 2 GHz MSS AMS(R)S.

Given these circumstances, it would be premature to adopt Part 87 rules for the provision of AMS(R)S in the 2 GHz MSS band. The Commission should await the development of standards by the two bodies with principal jurisdiction over civil aviation – ICAO internationally and the FAA domestically – to ensure

⁹ See FAA TSO-C159, Avionics Supporting Next Generation Satellite Systems (NGSS), published at 69 Fed. Reg. 35127 (June 23, 2004).

an adequate record before making any judgments as to rules governing AMS(R)S in the 2 GHz MSS band.

III. INTRA-SYSTEM PRIORITY AND PREEMPTIVE ACCESS SHOULD BE REQUIRED FOR AMS(R)S SERVICES IN THE 2 GHz MSS BAND.

The Commission has asked whether priority and preemptive access should be required for AMS(R)S services that are provided in additional bands, including the 2 GHz MSS band.¹⁰ For reasons that are discussed above, TerreStar believes that AMS(R)S rules should not be adopted for the 2 GHz MSS band at this time.

TerreStar, however, supports expanding Part 87 to include AMS(R)S rules for the 2 GHz MSS band at the appropriate time. When such rules are adopted, they should include intra-system priority and preemptive access requirements. AMS(R)S communications are safety of life communications, and as such should be given priority over communications that are not safety related. TerreStar's system will be fully capable of giving priority and preemptive access to safety of life communications.

The Commission has sought comment as to "the impact of any priority and preemptive access requirements for AMS(R)S upon other critical uses, such as homeland security and defense uses, that are either currently being provided or may be provided in the future to MSS terminals."¹¹

TerreStar is sensitive to the need to balance the requirements of multiple constituencies that have a need for priority communications. TerreStar's system will

¹⁰ FNPRM, ¶¶ 30, 32.

¹¹ FNPRM, ¶ 32.

have the capability to prioritize traffic by rank, agency and application type (*i.e.*, voice, data, video), thereby ensuring critical communication is maintained to all communities of interest, such as the federal government, first responders, commercial airlines, and the military. The needs of these constituencies are best addressed on a case-by case basis, based on discussions among the relevant parties. TerreStar believes it would be counter-productive to attempt to craft a rule that would apply in all situations.

IV. THE COMMISSION SHOULD NOT FORECLOSE WAIVERS OF ATC TECHNICAL RULES THAT WERE DESIGNED TO PROTECT AN AERONAUTICAL MOBILE SATELLITE SYSTEM THAT HAS BEEN ABANDONED.

There is a direct relationship between the rules the Commission adopts in this proceeding for AMS(R)S systems and the rules it adopted previously for MSS networks that include an ancillary terrestrial components (“ATC”). In its ATC proceeding, the Commission adopted intra-service technical limits on ATC operations in order to protect 2 GHz MSS aeronautical services that Boeing at the time was planning to provide.

At the time the ATC rules were adopted, there were five authorized 2 GHz MSS systems (Boeing, Celsat, ICO, Iridium, and TMI), and the authorizations for an additional three systems (Constellation, Globalstar, and MCHII) had been declared null and void at the staff level but were under review.

Boeing planned to use its 2 GHz MSS system to provide aeronautical mobile satellite services (“AMSS”).¹² Boeing submitted “substantial technical studies” in the ATC rulemaking, based on which it raised concerns about potential ATC interference to its AMSS operations.¹³ Boeing “was the only 2 GHz MSS band licensee to express concern about ATC operations potentially interfering with its MSS system.”¹⁴ Based on the concerns raised by Boeing, the Commission adopted intra-service technical limits for 2 GHz MSS ATC operations.

In light of the fact that Boeing is no longer licensed in the 2GHz band, it may be necessary for the Commission to revisit the obligations set in place to protect the Boeing system. TerreStar asks that the Commission take no action in this proceeding that would foreclose the opportunity to change or waive these outdated restrictions on a proper showing.

CONCLUSION

For the reasons stated above, the Commission should not adopt Part 87 rules for the provision of AMS(R)S in the 2 GHz MSS band. When appropriate, however, any such rules that the Commission does adopt should include intra-system priority and preemptive access requirements for AMS(R)S’ safety of life communications. Finally, the Commission take no action in this proceeding that would foreclose the opportunity

¹² ATC Order, ¶ 106.


¹³ ATC Order, ¶ 110.

¹⁴ ATC Order, ¶ 107.

to change or waive outdated restrictions that were adopted to protect 2 GHz MSS
aeronautical services that are no longer planned or provided.

Respectfully submitted,

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